

Hannah Lee Grade 5 Science Lesson Plan #1: Hydroponics

Teacher Standards:

3b Using Questioning and Discussion Techniques

3c Engaging Students in Learning

Student Standards:

CCSS.ELA-LITERACY.RL.5.1

Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

Science: The health, growth, and development of organisms are affected by environmental conditions such as the availability of food, air, water, space, shelter, heat, and sunlight. (5.2g)

RI.5.7: Draw information from multiple digital or print sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

W.5.3: Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

W.5.5: With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, editing, rewriting or trying a new approach.

Teaching Point:

Students will identify the necessary nutrients that plants need to grow and the effect of soil farming is having on earth.

Students will understand what hydroponics.

Essential Questions:

1. What do plants need to grow?
2. How do hydroponics work?
3. What are some effects that humans have on the soil farming?
4. Why would hydroponics help the environment?

Whole Class Lesson:

1. As a whole class we will go through the powerpoint on what plants need to grow.

(<http://www.conference.ifas.ufl.edu/aitc/presentations/Session%204/Hydroponics%20in%20the%20Classroom/Hydroponics%20in%20the%20Classroom%20PowerPoint%20Presentation.pdf>)

From the class discussion, students will write down notes using a K-W-L Chart on what they know and what they learned about growing plants

2. During the lesson students will be asked to discuss the following questions in small groups according to their reading partner. Each group will be assigned one question to answer for turn and talk discussion.

Why do you think spring is the best season to grow plants?

Why are plants important to the world?

What do you think happens to a farmer's crops if they get too much rain and no sunlight? Or too much sunlight and no rain?

Do you think you will be a farmer or have a garden when you grow up? Why or why not?

3. After students will get into their guided reading groups which is assigned by their reading levels and read the following article about soil farming.

http://www.classzone.com/science_book/mls_grade7_FL/248_252.pdf

4. During their independent group time students will write

Process Rubric for Project				
	4	3	2	1
Gathering Information	Gathers a lot of information to answer the questions	Gathers some information for each question	Has information on some of the questions	Little information gathered
Organizing Information	Information is well organized on Notes Sheet	Is able to organize information in some sections	Tries to organize information	Shows little skill in using the Notes Sheet
Using Information	Shows insight in drawing conclusions from information	Makes a decision using all of the information	Uses some information to make a decision	Shows little purpose for gathering data
Thinking	Demonstrates clear, creative thinking and is insightful	Uses some creativity in their approach to the problem	Shows little creative thinking	Exhibits no creative thinking

down how we are damaging soil farming. They will come up with two examples from the text to support their answer. Students who have IEP will work with a T-chart gathering their information of the effects of soil farming.

Assessment:

Students will be able to write a one-two paragraph about the negative effects of soil farming and support their statement with evidences from the text and the class notes.

Students will be assessed in having their statement base on their reading and support with evidence from the text.